

# SEQUENCE LISTING

<110> Gordon-Kamm, William  
Lowe, Keith  
Sun, Yuejin  
Dilkes, Brian  
Larkins, Brian

<120> Cell Cycle Nucleic Acids, Polypeptides,  
and Uses Thereof

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ggcgttgctg cag atg ggg aag tac atg cgc aag tgc agg ggc gcc gca          169
              Met Gly Lys Tyr Met Arg Lys Cys Arg Gly Ala Ala
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ggc gcg gag gtc gcc gcc gtc gag gtt acg cag gtc gtc ggc gtc cgg          217
Gly Ala Glu Val Ala Ala Val Glu Val Thr Gln Val Val Gly Val Arg
              15              20              25

acg agg tcc agg tcc gcg gcg gcg acc ggc ggt gtc gcg aag gtc gcc          265
Thr Arg Ser Arg Ser Ala Ala Ala Thr Gly Gly Val Ala Lys Val Ala
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ccg agg agg aag agg gcg ccg gcg ggg gag cct gct gcc gcc gtg agc          313
Pro Arg Arg Lys Arg Ala Pro Ala Gly Glu Pro Ala Ala Ala Val Ser
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gct ggt ggg gac ggc gga agc tgc tac atc cac ctg cgt agc cgc atg          361
Ala Gly Gly Asp Gly Gly Ser Cys Tyr Ile His Leu Arg Ser Arg Met
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ctg ttc atg gca ccg cct cag ccg cag ccg tcg gtt gac tcg gtt ccg          409
Leu Phe Met Ala Pro Pro Gln Pro Gln Pro Ser Val Asp Ser Val Pro
              80              85              90

acc ccg gtg gag gct gct gat ggc gct gca gga cag cag ggc gcg gcg          457
Thr Pro Val Glu Ala Ala Asp Gly Ala Ala Gly Gln Gln Gly Ala Ala
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ttg ggc ttg ggg ggt cag cgc ggg agc cac acc tgc cgc tcc tac gac	553
Leu Gly Leu Gly Gly Gln Arg Gly Ser His Thr Cys Arg Ser Tyr Asp	
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gct gca gag gct ggc ggg gat cac gtc ctg gtg gat gtc tgc gcg gcg	601
Ala Ala Glu Ala Gly Gly Asp His Val Leu Val Asp Val Ser Ala Ala	
145 150 155	
agc aac tcc ggg agc ggc cca gac cgc gag agg cga gag acg acg cca	649
Ser Asn Ser Gly Ser Gly Pro Asp Arg Glu Arg Arg Glu Thr Thr Pro	
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Ser Ser Arg Ala His Gly Glu Leu Ser Asp Leu Glu Ser Asp Leu Ala	
175 180 185	
ggg cac aag act ggc ccg tgc cta ccg gcg gca acg ccg gct gcg gag	745
Gly His Lys Thr Gly Pro Ser Leu Pro Ala Ala Thr Pro Ala Ala Glu	
190 195 200	
ctg atc gtg ccg cca gca cac gag atc cag gag ttc ttc gcc gcc gcc	793
Leu Ile Val Pro Pro Ala His Glu Ile Gln Glu Phe Phe Ala Ala Ala	
205 210 215 220	
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Glu Ala Ala Gln Ala Lys Arg Phe Ala Ser Lys Tyr Asn Phe Asp Phe	
225 230 235	
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Val Arg Gly Val Pro Leu Asp Ala Gly Gly Arg Phe Glu Trp Ala Pro	
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Val Val Ser Ile	
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35 40 45  
Arg Ala Pro Ala Gly Glu Pro Ala Ala Ala Val Ser Ala Gly Gly Asp  
50 55 60  
Gly Gly Ser Cys Tyr Ile His Leu Arg Ser Arg Met Leu Phe Met Ala  
65 70 75 80  
Pro Pro Gln Pro Gln Pro Ser Val Asp Ser Val Pro Thr Pro Val Glu  
85 90 95  
Ala Ala Asp Gly Ala Ala Gly Gln Gln Gly Ala Ala Leu Ala Ala Gly  
100 105 110  
Leu Ser Arg Cys Ser Ser Thr Ala Ser Ser Val Asn Leu Gly Leu Gly  
115 120 125  
Gly Gln Arg Gly Ser His Thr Cys Arg Ser Tyr Asp Ala Ala Glu Ala  
130 135 140  
Gly Gly Asp His Val Leu Val Asp Val Ser Ala Ala Ser Asn Ser Gly  
145 150 155 160  
Ser Gly Pro Asp Arg Glu Arg Arg Glu Thr Thr Pro Ser Ser Arg Ala  
165 170 175  
His Gly Glu Leu Ser Asp Leu Glu Ser Asp Leu Ala Gly His Lys Thr  
180 185 190  
Gly Pro Ser Leu Pro Ala Ala Thr Pro Ala Ala Glu Leu Ile Val Pro  
195 200 205  
Pro Ala His Glu Ile Gln Glu Phe Phe Ala Ala Ala Glu Ala Ala Gln  
210 215 220  
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tcgaaacct agcttgccca gccctccgg gcc atg ggc aag tac atg cgc aag 174  
Met Gly Lys Tyr Met Arg Lys  
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gcc aag gct tcc agc gag gtt gtc atc atg gat gtc gcc gcc gct ccg 222  
Ala Lys Ala Ser Ser Glu Val Val Ile Met Asp Val Ala Ala Ala Pro  
10 15 20

ctc gga gtc cgc acc cga gcg cgc gcc ctc gcg ctg cag cgt ctg cag	270
Leu Gly Val Arg Thr Arg Ala Arg Ala Leu Ala Leu Gln Arg Leu Gln	
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gag cag cag acg cag tgg gag gaa ggt gct ggc ggc gag tac ctg gag	318
Glu Gln Gln Thr Gln Trp Glu Glu Gly Ala Gly Gly Glu Tyr Leu Glu	
40 45 50 55	
cta agg aac cgg agg ctc gag aag ctg ccg ccg ccg ccg gcg acc acg	366
Leu Arg Asn Arg Arg Leu Glu Lys Leu Pro Pro Pro Pro Ala Thr Thr	
60 65 70	
agg agg tcg ggc ggg agg aaa gcg gca gcc gag gcc gcc gca act aag	414
Arg Arg Ser Gly Gly Arg Lys Ala Ala Ala Glu Ala Ala Ala Thr Lys	
75 80 85	
gag gct gag gcg tcg tac ggg gag aac atg ctc gag ttg gag gcc atg	462
Glu Ala Glu Ala Ser Tyr Gly Glu Asn Met Leu Glu Leu Glu Ala Met	
90 95 100	
gag agg att acc agg gag acg acg cct tgc agc ttg att aac acc cag	510
Glu Arg Ile Thr Arg Glu Thr Thr Pro Cys Ser Leu Ile Asn Thr Gln	
105 110 115	
atg act agc act cct ggg tcc acg aga tcc agc cac tct tgc cac cgc	558
Met Thr Ser Thr Pro Gly Ser Thr Arg Ser Ser His Ser Cys His Arg	
120 125 130 135	
agg gtg aac gct cct ccg gtg cac gcc gtc cca agt tcg agg gag atg	606
Arg Val Asn Ala Pro Pro Val His Ala Val Pro Ser Ser Arg Glu Met	
140 145 150	
aat gag tac ttc gct gcc gaa cag cga cgc caa caa cag gat ttc att	654
Asn Glu Tyr Phe Ala Ala Glu Gln Arg Arg Gln Gln Gln Asp Phe Ile	
155 160 165	
gac aag tac aac ttc gat cct gca aac gac tgc cct ctc cca ggc agg	702
Asp Lys Tyr Asn Phe Asp Pro Ala Asn Asp Cys Pro Leu Pro Gly Arg	
170 175 180	
ttt gag tgg gtg aag cta gac t gatggattca gagggacgag agagcagcag	754
Phe Glu Trp Val Lys Leu Asp	
185 190	
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tgtagcctta attggtcgtg tgttacagta cagaactgat gctgagttac aacaccctga	934
tctggtcttg atctgatccc tcaactccaa tgtaaccctt aacagctcat tctgtaagga	994
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Pro	Pro	Pro	Pro	Ala	Thr	Thr	Arg	Arg	Ser	Gly	Gly	Arg	Lys	Ala	Ala
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Cys	Ser	Leu	Ile	Asn	Thr	Gln	Met	Thr	Ser	Thr	Pro	Gly	Ser	Thr	Arg
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	130					135					140				
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Arg	Gln	Gln	Gln	Asp	Phe	Ile	Asp	Lys	Tyr	Asn	Phe	Asp	Pro	Ala	Asn
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agcgagaaga	aggcagtgtc	gcggcgccgt	tccgtaag	atg ggg aag tac atg cgc			176
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aag cgc agg ggg gcc gcg ggc gag ggg gtg gcc gca gtc gag gtc tcg							224
Lys Arg Arg Gly Ala Ala Gly Glu Gly Val Ala Ala Val Glu Val Ser							
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cag gtc gtc ggc gtc cgg acg agg tcc agg tcc gcg gcg gcg acc ggc							272
Gln Val Val Gly Val Arg Thr Arg Ser Arg Ser Ala Ala Ala Thr Gly							
	25		30		35		
ggc ggt gtc gcg aag gtc gct ccg ccg agg agg aag aag gcg ctg ctg							320
Gly Gly Val Ala Lys Val Ala Pro Pro Arg Arg Lys Lys Ala Leu Leu							
	40		45		50		
ccc gcc gcg aac gtg acg acg tcg ggg gag cct ggt gcc gtg ggc gct							368
Pro Ala Ala Asn Val Thr Thr Ser Gly Glu Pro Gly Ala Val Gly Ala							
	55		60		65		70
ggt ggt ggg gac ggc gga agc tgc tgc tac atc cac ctg cgg agc cgc							416

Gly Gly Gly Asp Gly Gly Ser Cys Cys Tyr Ile His Leu Arg Ser Arg	
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atg ctg ttc atg gca gca cct cag cag caa ccg tcg gcg gct ctg acg	464
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Pro Val Glu Ala Ala Gly Ala Ala Xaa Gln Gly Gly Val Val Ala Leu	
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gcg gct ggc ctc tcg cgt tgc tcc agc acg gcg tcg tcg gtg gac gtc	560
Ala Ala Gly Leu Ser Arg Cys Ser Ser Thr Ala Ser Ser Val Asp Val	
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Gly Gly His Ala Cys Arg Ser Asp Ala Ala Pro Ala Glu Val Asp Gly	
135 140 145 150	
gat cac gtc ccg gat gtc gtc acc gcg agc aac tcg ggg agc gtc ccg	656
Asp His Val Pro Asp Val Val Thr Ala Ser Asn Ser Gly Ser Val Pro	
155 160 165	
gac cgc gag agg aga gag acg acg cca tcg tcg agc cgg gcg cac ggc	704
Asp Arg Glu Arg Arg Glu Thr Thr Pro Ser Ser Ser Arg Ala His Gly	
170 175 180	
ggc gag ctc agc gat ctg gag tcg gat ctg gtg ggg cgg cag aag act	752
Gly Glu Leu Ser Asp Leu Glu Ser Asp Leu Val Gly Arg Gln Lys Thr	
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Gly Cys Ser Ser Ser Pro Ala Thr Thr Thr Ser Ala Ala Glu Leu Ile	
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Arg Lys Lys Ala Leu Leu Pro Ala Ala Asn Val Thr Thr Ser Gly Glu	

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Ile	His	Leu	Arg	Ser	Arg	Met	Leu	Phe	Met	Ala	Ala	Pro	Gln	Gln	Gln
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Pro	Ser	Ala	Ala	Leu	Thr	Pro	Val	Glu	Ala	Ala	Gly	Ala	Ala	Xaa	Gln
			100					105					110		
Gly	Gly	Val	Val	Ala	Leu	Ala	Ala	Gly	Leu	Ser	Arg	Cys	Ser	Ser	Thr
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Ala	Ser	Ser	Val	Asp	Val	Gly	Gly	His	Ala	Cys	Arg	Ser	Asp	Ala	Ala
	130				135					140					
Pro	Ala	Glu	Val	Asp	Gly	Asp	His	Val	Pro	Asp	Val	Val	Thr	Ala	Ser
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Asn	Ser	Gly	Ser	Val	Pro	Asp	Arg	Glu	Arg	Arg	Glu	Thr	Thr	Pro	Ser
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Ser	Ser	Arg	Ala	His	Gly	Gly	Glu	Leu	Ser	Asp	Leu	Glu	Ser	Asp	Leu
		180					185					190			
Val	Gly	Arg	Gln	Lys	Thr	Gly	Cys	Ser	Ser	Ser	Pro	Ala	Thr	Thr	Thr
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Ser	Ala	Ala	Glu	Leu	Ile	Val	Pro	Pro	Ala	Gln	Glu	Ile	Gln	Glu	Phe
	210				215						220				
Phe	Ala	Ala													
225															